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EXAMINER	
MOORE, IAN N	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	09/821,962	POSTHUMA, CARL ROBERT	
	Examiner	Art Unit	
	Ian N. Moore	2616	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *30 July 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,5-10,15,16,19-30,42 and 44-46* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,5-10,15,16,19-30,42 and 44-46* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 1,5-10,15,16,19-30,42, and 44-46 are objected to because of the following informalities:

Claim 1 recites, "a subscriber" in line 10. For clarification and consistency with "a single subscriber" in line 3, it is suggested to revise "a subscriber" in line 10 as "the subscriber".

Claim 42 also objected for the same reason as set forth above in claim 1.

Claim 19 discloses "the multimode circuit interface having a first circuit interface that supports xDSL service", which has already recited in claim 1, lines 12-13. Thus, these limitations are in claim 19 are duplicate. It is suggested to remove the duplicate limitations in claim 19.

Claim 21 discloses "the first interface supports at least one of asymmetric digital subscriber line service, asymmetric digital subscriber line lite service, and very high bit rate digital subscriber line service", which has already recited in claim 1, lines 14-16. Thus, these limitations are in claim 21 are duplicate. It is suggested to remove the duplicate limitations in claim 21.

Claims 5-10, 15, 16, 20, 22-30, 42, and 44-46 are also objected since they are depended upon objected claims 1 and 42 as set forth above.

Appropriate corrections are required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claim 1-3, 5,6, 15,19-21,23-25,27-30 and 42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valentine (US006356547B1) in view of Seazholtz (US006424636B1).

Regarding Claim 1, Valentine discloses a line card (see FIG. 2, a line circuit 75 or FIG. 3, a line circuit 100) for a telecommunication system (see FIG. 1, a communication system; see col. 3, lines 35-37; see col. 7, lines 5-7), comprising:

a multiple mode circuit (see FIG. 3, a line circuit 100 or FIG. 2, a line circuit 75) adapted for installation in equipment (see FIG. 1-2, a line circuit 100 installs inside DLC 42; see col. 4, line 16-46) that provides at least one of POTS service (see FIG. 3, POTS) and ISDN service (see FIG. 3, ISDN; see col. 7, lines 8-21, see col. 5, lines 60-67) on a single subscriber line while concurrently providing one of a plurality of types of xDSL telecommunication service (see FIG. 3, one type of XDSL) on said single subscriber line on said single subscriber line supplied to a subscriber' residence as a single pair of wires (see FIG. 1, see col. 4, lines 14-60; see col. 7, lines 8-21; a single interface provides POTS/ISDN and xDSL services concurrently/parallel over a single subscriber loop/trunk 29/41 to a subscriber 15 location/residence as single line circuit of pair of wires; note that a single line circuit in the Digital Loop Carriers (DLC) is a wire pair/loop),

the multiple mode circuit including a controller (see FIG. 2 or 3, a combined system of DSP 66 and store algorithms (memory) 68) that receives the instructions from an external device (see FIG. 1, O/M center 50; see FIG. 2, O/M interface 52) with regard to the plurality of telecommunication services (see col. 5, lines 44-50; see col. 6, lines 1-15; see col. 7, lines 22-59) and configures the multiple mode circuit to operate said plurality of telecommunication services (see FIG. 1, O/M center 50 (Operations management center 50) configures/manages/control a line circuit 42 for multiplexed POTS/ISDN and xDSL services; see col. 5, lines 30-50; see col. 6, lines 1-15; see col. 7, lines 22-59), wherein the external device comprises one of a broad band element management system, a PSTN switch, and a PSTN maintenance center (see FIG. 1, O/M center 50, Operations management center 50; see col. 5, lines 44-50; see col. 6, lines 1-15; see col. 7, lines 22-59);

the controller changing in response to a command received from a subscriber (see col. 3, line 45-49; see col. 4, line 13-25, 43-46, 55-61; see col. 6, line 15-20; the combined control system 14-16-18 changing according to a signaling/command/request message from a subscriber 15) from a first type of xDSL telecommunication service (see FIG. 3, first type of XDSL, or first variety/type of xDSL protocol) to a second type of telecommunication service (see FIG. 3, ISDN or POTS) during an ongoing subscriber communications session (see col. 5, lines 1-43; see col. 6, lines 1-65; see col. 7, lines 10-44; update/change the configuration in/during a subscriber communication circuit/line/connection) of a subscriber (see FIG. 1, Subscriber 15 (e.g. caller)) on the signal subscriber line (see FIG. 1, signal line/trunk 29/45) with another party (see FIG. 1, subscriber 15 on the opposite side of the network (e.g. callee)); see col. 3, line 35-65;

the multimode circuit interface having a first circuit interface that supports xDSL service (see FIG. 1, line circuit 41 or FIG. 3, XDSL interface 106; see col. 4, lines 14-46; see col. 7, lines 8-21); and

the first interface supports at least one of asymmetric digital subscriber line service, asymmetric digital subscriber line lite service, and very high bit rate digital subscriber line service (see FIG. 3, ADSL, HDSL interface 106; see col. 4, lines 14-46; see col. 7, lines 8-21).

Although Valentine discloses that a combined system of signaling channel 32 and DLC circuit 42 which has a multiple mode system functionality (i.e. POTS, ADSL, HDSL, and ISDN) is at the remote end of the centralized call exchange (i.e. central office) (see Valentine col. 4, line 38-42),

Valentine does not explicitly disclose "at a central office" and a second type of xDSL telecommunication service, and a twisted pair.

However, it is well known and established in the art of DLC (Digital Loop Carrier) that DLC interface/line card, or multiple mode circuit/system can be deployed at the central office, and the remote end/terminal is extended end of the central office in order to overcome the trunk distance limitation. It is also well known in the art that a twist pair is used between the customer site (i.e. subscriber home/resident) and a central office. In particular, Seazholtz teaches a multi-mode circuit installed in a equipment at a central office (see FIG. 7, ADSL/AVR system/circuit install in a equipment at the central office; see col. 11, line 1-67) providing service on a single subscriber line supplied to a subscriber's residence as a single twisted pair of wires (see FIG. 4, providing services on a single subscriber line to a subscriber's premises as a twisted pair

transmission line; also see FIG. 9, twisted pair 90; see col. 11, line 16-23; see col. 12, line 36-42), and

the controller (see FIG. 7, Micoroprocessor/controller of the central office) changing in response to a command received from a subscriber (see FIG. 7; see col. 14, line 430,43-50; changing mode according to a selection request/command from a subscriber) from a first type of xDSL telecommunication service (see col. 12, line 1-16; see col. 13, line 51-65; col. 14, line 1-17; a changing first conventional ADSL type/mode) to a second type of xDSL telecommunication service (see col. 12, line 17-36; see col. 13, line 51-65; col. 14, line 13-45; to a second bidirectional improved type/mode of DSL (e.g. directional HDSL, see col. 2, line 1-7,25-37; see col. 6, line 46-55) for real time application) during an ongoing subscriber communications session (see col. 12, line 1-5; during a communication section) of a subscriber (see FIG. 7, Subscriber on subscriber premises (e.g. caller)) on the signal subscriber line (see FIG. 7, on the DSL line) with another party (see FIG. 7, another Subscriber on the opposite end (e.g. callee)); see col. 11, line 1-20; see col. 12, line 1-16).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a twisted pair and changing during an ongoing communications session, and to a second type of xDSL telecommunication service, as taught by Seazholtz in the system of Valentine, so that it would controllably operate in one of plurality of different modes ant at any one of a plurality of bits rates for a plurality of different services; see Seazholtz col. 2, line 54-67; and it would also provide efficiently, selectively and interactively transmission of services over a single twisted wire pair; see Seazholtz col. 1, line 10-16.

Regarding Claim 42, Valentine discloses a method for supporting multiple telecommunication services in a line card (see FIG. 2, a line circuit 75 or FIG. 3, a line circuit 100 and see FIG. 3, DSP 66) comprising the steps of:

selecting at one line card adapted for installation in equipment (see FIG. 1-2, a line circuit 100 installs inside DLC 42; see col. 4, line 16-46) either a first operational mode or a second operational mode for the line card (see FIG. 3, 106 A-E; see col. 7, lines 6-30; see col. 5, lines 552-65; tuning to the services/bands/modes among A-E services/bands/modes), wherein the first operational mode provides substantial concomitant operation of one type of xDSL telecommunication service and POTS service on a single subscriber line supplied to a subscriber's residence as a single pair of wires (see col. 7, lines 8-21, see col. 5, lines 60-67; one type/mode of xDSL (i.e. ADSL) and POTS over a single subscriber loop/trunk 29/41), and the second operational mode provides concomitant operation of another type xDSL telecommunication service (see FIG. 1-3, see col. 7, lines 8-21, see col. 5, lines 60-67; another type/mode of XDSL (i.e. HDSL)) and POTS) on the single subscriber line (see FIG. 1 and 3, see col. 4, lines 14-46; see col. 7, lines 8-21; ; a single interface provides POTS/ISDN and xDSL services concurrently/parallel over a single subscriber loop/trunk 29/41 to a subscriber 15 location/residence as single line circuit of pair of wires; note that a single line circuit in the Digital Loop Carriers (DLC) is a wire pair/loop);

separating the xDSL telecommunication signals and POTS signals, and processing the xDSL telecommunication signals and the POTS signals (see col. 7, lines 6-30; see col. 5, lines 552-65; separately processing xDSL and POTS);

changing upon receipt of a command from a subscriber (see col. 3, line 45-49; see col. 4, line 13-25, 43-46, 55-61; see col. 6, line 15-20; the combined control system 14-16-18 changing according to a signaling/command/request message from a subscriber 15) from a first type of xDSL telecommunication service (see FIG. 3, first type of XDSL, or first variety/type of xDSL protocol) to a second type of telecommunication service (see FIG. 3, ISDN or POTS) during an ongoing subscriber communications session (see col. 5, lines 1-43; see col. 6, lines 1-65; see col. 7, lines 10-44; update/change the configuration in/during a subscriber communication circuit/line/connection) of a subscriber (see FIG. 1, Subscriber 15 (e.g. caller)) on the signal subscriber line (see FIG. 1, signal line/trunk 29/45) with another party (see FIG. 1, subscriber 15 on the opposite side of the network (e.g. callee)); see col. 3, line 35-65;

receiving (see FIG. 2-3, Interface 60) a signal from the subscriber (see FIG. 2, the combined system 66-68 receives a change indication from the subscriber 15 via Interface 60) during the ongoing communication session where the signal is a request to change from the first type of xDSL telecommunications service to the second type of telecommunication service (see col. 5, lines 1-43; see col. 6, lines 1-65; see col. 7, lines 10-44; an notification/request/desired indicates that a subscriber 15 want to change from first type of XDSL, or first variety/type of xDSL protocol service to POTS/ISDN service). Seazholtz also discloses the controller includes means for receiving (see FIG. 7, MUX) a signal from the subscriber (see col. 14, line 5-25; receiving a request for a change in modes) during the ongoing communication session (see col. 14, line 1-7; during the communication session) where the signal is a request to change from the first type of xDSL telecommunications service to the second type or xDSL telecommunication service (see col. 14, line 5-40; a changing first conventional ADSL type/mode to a second

bidirectional improved type/mode of DSL (e.g. directional HDSL, see col. 2, line 1-7,25-37; see col. 6, line 46-55) for real time application; see col. 12, line 17-36; see col. 13, line 51-65; col. 14, line 5-45).

Although Valentine discloses that a combined system of signaling channel 32 and DLC circuit 42 which has a multiple mode system functionality (i.e. POTS, ADSL, HDSL, and ISDN) is at the remote end of the centralized call exchange (i.e. central office) (see Valentine col. 4, line 38-42),

Valentine does not explicitly disclose "at a central office" and a second type of xDSL telecommunication service, and twisted pair.

However, it is well known and established in the art of DLC (Digital Loop Carrier) that DLC interface/line card, or multiple mode circuit/system can be deployed at the central office, and the remote end/terminal is extended end of the central office in order to overcome the trunk distance limitation. In particular, Seazholtz teaches a multi-mode circuit installed in a equipment at a central office (see FIG. 7, ADSL/AVR system/circuit install in a equipment at the central office; see col. 11, line 1-67), providing service on a single subscriber line supplied to a subscriber's residence as a single twisted pair of wires (see FIG. 4, providing services on a single subscriber line to a subscriber's premises as a twisted pair transmission line; also see FIG. 9, twisted pair 90; see col. 11, line 16-23; see col. 12, line 36-42), and

the controller (see FIG. 7, Micoroprocessor/controller of the central office) changing in response to a command received from a subscriber (see FIG. 7; see col. 14, line 430,43-50; changing mode according to a selection request/command from a subscriber) from a first type of xDSL telecommunication service (see col. 12, line 1-16; see col. 13, line 51-65; col. 14, line 1-

17; a changing first conventional ADSL type/mode) to a second type of xDSL telecommunication service (see col. 12, line 17-36; see col. 13, line 51-65; col. 14, line 13-45; to a second bidirectional improved type/mode of DSL (e.g. directional HDSL, see col. 2, line 1-7,25-37; see col. 6, line 46-55) for real time application) during an ongoing subscriber communications session (see col. 12, line 1-5; during a subscriber communication section) of a subscriber (see FIG. 7, Subscriber on subscriber premises (e.g. caller)) on the signal subscriber line (see FIG. 7, on the DSL line) with another party (see FIG. 7, another Subscriber on the opposite end (e.g. callee)); see col. 11, line 1-20; see col. 12, line 1-16).

Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to provide a twisted pair and changing during an ongoing communications session, and to a second type of xDSL telecommunication service, as taught by Seazholtz in the system of Valentine, so that it would controllably operate in one of plurality of different modes ant at any one of a plurality of bits rates for a plurality of different services; see Seazholtz col. 2, line 54-67; and it would also provide efficiently, selectively and interactively transmission of services over a single twisted wire pair; see Seazholtz col. 1, line 10-16.

Regarding Claim 5, Valentine discloses a second interface that supports at least one of the ISDN telecommunication service and the POTS service (see FIG. 1, line circuit 41 or FIG. 3, ISDN and POTS interface 106; see col. 7, lines 8-21, see col. 5, lines 60-67).

Regarding Claim 6, Valentine discloses wherein the second interface supports at least one of 2B1Q ISDN service and 4B3T ISDN service (see FIG. 1, line circuit 41 or FIG. 3, ISDN interface 106; see col. 7, lines 8-21, see col. 5, lines 60-67; ISDN link is 2B1Q).

Regarding Claim 15, Valentine discloses wherein the controller includes means for receiving (see FIG. 2-3, Interface 60) a signal from the subscriber (see FIG. 2, the combined system 66-68 receives a change indication from the subscriber 15 via Interface 60) during the ongoing communication session where the signal is a request to change from the first type of xDSL telecommunications service to the second type of telecommunication service (see col. 5, lines 1-43; see col. 6, lines 1-65; see col. 7, lines 10-44; an notification/request/desired indicates that a subscriber 15 want to change from first type of XDSL, or first variety/type of xDSL protocol service to POTS/ISDN service). Seazholtz also discloses the controller includes means for receiving (see FIG. 7, MUX) a signal from the subscriber (see col. 14, line 5-25; receiving a request for a change in modes) during the ongoing communication session (see col. 14, line 1-7; during the communication session) where the signal is a request to change from the first type of xDSL telecommunications service to the second type or xDSL telecommunication service (see col. 14, line 5-40; a changing first conventional ADSL type/mode to a second bidirectional improved type/mode of DSL (e.g. directional HDSL, see col. 2, line 1-7,25-37; see col. 6, line 46-55) for real time application; see col. 12, line 17-36; see col. 13, line 51-65; col. 14, line 5-45).

Regarding Claim 19, Valentine discloses the multimode circuit interface having a first circuit interface that supports xDSL service (see FIG. 1, line circuit 41 or FIG. 3, XDSL interface 106; see col. 4, lines 14-46; see col. 7, lines 8-21).

Regarding Claim 20, Valentine discloses the multiple mode circuit comprises a first circuit interface that supports xDSL service substantially concomitant (see FIG. 1, line circuit 41 or FIG. 3, XDSL interface 106) with one of the POTS service (see FIG. 1 and 3, POTS; see col.

4, lines 14-46; see col. 7, lines 8-21; interface providing various services operates simultaneously/concomitant since various services are coupled in parallel).

Regarding Claim 21, the first interface supports at least one of asymmetric digital subscriber line service, asymmetric digital subscriber line lite service, and very high bit rate digital subscriber line service (see FIG. 3, ADSL, HDSL interface 106; see col. 4, lines 14-46; see col. 7, lines 8-21).

Regarding Claim 23, Valentine discloses wherein the multiple mode circuit supports ISDN service (see FIG. 3, ISDN; see col. 7, lines 8-21, see col. 5, lines 60-67).

Regarding Claim 24, the claim, which has substantially disclosed all the limitations of the respective claim 6. Therefore, it is subjected to the same rejection.

Regarding Claim 25, Valentine discloses wherein the multiple mode circuit supports the ISDN service substantially concomitant (see FIG. 3, ISDN; see col. 7, lines 8-21, see col. 5, lines 60-67) with the xDSL digital subscriber line services (see FIG. 3, XDSL; see col. 7, lines 8-21, see col. 5, lines 60-67).

Regarding Claim 27, Valentine discloses an automatic mode circuit that configures the multiple mode circuit (see FIG. 2 or 3, a combined system of DSP 66 and store algorithms (memory) 68; see col. 5, lines 44-50; see col. 6, lines 1-15; see col. 7, lines 22-59).

Regarding Claim 28, Valentine discloses wherein the automatic mode circuit configures the multiple mode circuit to operate a combination of the plurality of telecommunication services (see col. 5, lines 44-50; see col. 6, lines 1-15; see col. 7, lines 22-59).

Regarding Claim 29, Valentine discloses wherein the automatic mode circuit comprises: a controller (see FIG. 2 or 3, a combined system of DSP 66) that receives instructions with

regard to the plurality of telecommunication services and controls the multiple mode circuit in accordance with the instructions (see col. 5, lines 44-50; see col. 6, lines 1-15; see col. 7, lines 22-59).

Regarding Claim 30, Valentine discloses wherein the controller receives the instructions from an external device (see FIG. 1, O/M center 50; see FIG. 2, O/M interface 52; see col. 5, lines 44-50; see col. 6, lines 1-15; see col. 7, lines 22-59).

4. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valentine in view of Seazholtz and further in view of Barker (US006470020B).

Regarding Claim 9, neither Valentine nor Seazholtz explicitly discloses P-Phone services. However, providing p-phone service is well known in the art. In particular, Barker discloses p-phone services (see abstract; see FIG. 1, p-phone; see col. 1, lines 25-40; see col. 6, lines 64 to col. 7, lines 36). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Valentine and Seazholtz, by providing p-phone services, as taught by Barker. The motivation to combine is to obtain the advantages/benefits taught by Barker since Barker states at col. 1, line 25-60, col. 2, lines 25-30; col. 3, lines 35-50 that such modification would provide stimulus singling protocol of p-phone for business handsets, and overcome prior problems by integrating stimulus signaling protocol communication system with message protocol communication system.

Alternatively, the combined system of Valentine and Seazholtz teaches xDSL services, ISDN, POTS, ADSL, HDSL services, and emerging variety of xDSL services at the line card of the central office. Providing additional p-phone services at the interface do not define a

patentable distinct invention over that in the system of Valentine since both the invention as a whole and the combined system of Valentine and Seazholtz is directed to providing different services at the central office. The degree in which providing two additional services presents no new or unexpected results, so long as different plurality of services is provided in a successful way. Therefore, to provide p-phone services would have been routine experimentation and optimization in the absence of criticality.

5. Claim 10 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valentine in view of Seazholtz and further in view of Starr (US006324167B1).

Regarding Claim 10, neither Valentine nor Seazholtz explicitly discloses DAML services. However, providing DAML service is well known in the art. In particular, Starr discloses DAML services (see FIG. 2A, DAML 64 and DAML 58; see col. 2, lines 50 to col. 3, lines 11). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Valentine and Seazholtz, by providing DAML services, as taught by Starr. The motivation to combine is to obtain the advantages/benefits taught by Starr since Starr states at col. 2, lines 1-29 that such modification would derive additional communication channels wherein each additional communication channel is modulated into a separated frequency band by way to a separated transceiver unit such as a DAML.

The combined system of Valentine and Seazholtz teaches xDSL services, ISDN, POTS, ADSL, HDSL services, and emerging variety of xDSL services at the line card of the central office. Providing additional DAML services at the interface do not define a patentable distinct

invention over that in the combined system of Valentine and Seazholtz since both the invention as a whole and the system of Valentine is directed to providing different services at the central office. The degree in which providing two additional services presents no new or unexpected results, so long as different pluralities of services are provided in a successful way. Therefore, to provide DAML services would have been routine experimentation and optimization in the absence of criticality.

6. Claim 16 and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valentine in view of Seazholtz, and further in view of Heidari (US006512739B1).

Regarding Claim 16, the combined system of Valentine and Seazholtz disclose changing based upon information received via a signal as set forth above in claim 15.

Neither Valentine nor Seazholtz explicitly disclose a handshake signal.

However, changing based upon information received via a handshake signal is well known in the art. In particular, Heidari discloses wherein the controller (see FIG. 3, DSP 372) changes the configuration during a communication session based on information received via a handshake signal (see col. 6, lines 40 to col. 7, lines 35). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Valentine and Seazholtz, by changing based upon set/up (i.e. handshake) signal, as taught by Heidari. The motivation to combine is to obtain the advantages/benefits taught by Heidari since Heidari states at col. 2, lines 20-49 that such modification would provide access to theses higher frequency ranges at a reduced cost, and without the complexity.

Regarding Claim 44, the combined system of Valentine and Seazholtz disclose receiving the instruction to change based upon information received via a signal as set forth above in claim 15.

Neither Valentine nor Seazholtz explicitly discloses a handshake signal. However, receiving the instruction to change based upon information received in a handshake signal is well known in the art. In particular, Heidari discloses wherein the controller (see FIG. 3, DSP 372) receiving the instruction to change in a handshake signal (see col. 6, lines 40 to col. 7, lines 35). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Valentine and Seazholtz, by changing based upon set/up (i.e. handshake) signal, as taught by Heidari. The motivation to combine is to obtain the advantages/benefits taught by Heidari since Heidari states at col. 2, lines 20-49 that such modification would provide access to theses higher frequency ranges at a reduced cost, and without the complexity.

7. Claims 7,8,22,45-46 are rejected under 35 U.S.C. 103(a) as being unpatentable over Valentine in view of Seazholtz, and further in view of Ham (US006856682B1).

Regarding Claims 7 and 8, neither Valentine nor Seazholtz explicitly disclose POTS with PPM service wherein PPM service is any one of 12kHz PPM service or 16 kHz service. However, the above-mentioned claimed limitations are taught by Ham. In particular, Ham teaches a POTS with PPM service (see FIG. 2, POTS 14) and PPM service is any one of 12kHz PPM service or 16 kHz service (see col. 4, line 40-65; see col. 5, lines 35-40; see col. 8, lines 5-25; POTS with tax/billing/metering tones (i.e. PPM) services at 12k Hz or 16 kHz).

In view of this, having the combined system of Valentine and Seazholtz, and then given the teaching of Ham, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Valentine and Seazholtz, by providing /billing/metering tones (i.e. PPM) services at 12k Hz or 16 kHz, as taught by Ham. The motivation to combine is to obtain the advantages/benefits taught by Ham since Ham states at col. 1, line 55 to col. 2, lines 20 that such modification would reduce or eliminate the processing of an input signal communicated on a telephone line and provide cost effective POTS splitter that provide billing/metering services tones).

Regarding Claim 22, Valentine discloses a second interface that supports the POTS service (see FIG. 1, line circuit 41 or FIG. 3, POTS interface 106; see col. 7, lines 8-21, see col. 5, lines 60-67).

Neither Valentine nor Seazholtz explicitly disclose POTS with PPM service. However, the above-mentioned claimed limitations are taught by Ham. In particular, Ham discloses a second interface that supports the POTS service (see FIG. 2, frequency component 1, POTS, telephone signals) and POTS with PPM service (see FIG. 2, frequency component 2 for POTS with tax/billing/metering tones (i.e. PPM) services; see col. 4, line 40-65; see col. 5, lines 35-40; see col. 8, lines 5-25).

In view of this, having the combined system of Valentine and Seazholtz, then given the teaching of Ham, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Valentine and Seazholtz, by providing POTS with billing/metering tones (i.e. PPM) services, as taught by Ham. The motivation to combine is to obtain the advantages/benefits taught by Ham since Ham states at

col. 1, line 55 to col. 2, lines 20 that such modification would reduce or eliminate the processing of an input signal communicated on a telephone line and provide cost effective POTS splitter that provide billing/metering services tones).

Regarding Claim 45, Valentine discloses monitoring operation of the line card; and selecting an operational mode based on operation of the line card (see col. 5, lines 44-50; see col. 6, lines 1-15; see col. 7, lines 22-59).

Regarding Claim 46, the claim, which has substantially disclosed all the limitations of the respective claim 3, 21 or 41. Therefore, it is subjected to the same rejection.

8. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Valentine in view of Seazholtz as applied to claim 1 above, and further in view of Barker (US006470020B1).

Regarding Claim 26, neither Valentine nor Seazholtz explicitly discloses P-Phone services. However, providing p-phone service is well known in the art. In particular, Barker discloses p-phone services (see abstract; see FIG. 1, p-phone; see col. 1, lines 25-40; see col. 6, lines 64 to col. 7, lines 36). Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the combined system of Valentine and Seazholtz, by providing p-phone services, as taught by Barker. The motivation to combine is to obtain the advantages/benefits taught by Barker since Barker states at col. 1, line 25-60, col. 2, lines 25-30; col. 3, lines 35-50 that such modification would provide stimulus singling protocol of p-phone for business handsets, and overcome prior problems by integrating stimulus signaling protocol communication system with message protocol communication system.

Alternatively, the combined system of Valentine and Seazholtz teaches xDSL services, ISDN, POTS, ADSL, HDSL services, and emerging variety of xDSL services at the line card of the central office. Providing additional p-phone services at the interface do not define a patentable distinct invention over that in the system of Valentine since both the invention as a whole and the combined system of Valentine and Seazholtz are directed to providing different services at the central office. The degree in which providing two additional services presents no new or unexpected results, so long as different plurality of services is provided in a successful way. Therefore, to provide p-phone services would have been routine experimentation and optimization in the absence of criticality.

Response to Arguments

9. Applicant's arguments with respect to claim 1,5-10,15-16,19-30,42,44-46 have been considered but are moot in view of the new ground(s) of rejection.

Regarding claims 1,5-10,15-16,19-30,42,44-46, the applicant argued that,

"...Valentine is alleged to teach supplying ISDN or POTS concurrently with a type of xDSL communication service on a signal subscriber line...Valentine teaches only one communication mode/service is offered at a given time...it is unclear based on the explicitly teaching of Valentine of how element 29 is consistence with line 102...it is made clear in Valentine that only one communication mode at a time is provided to the subscriber...Valentine not being able to be changed during a ongoing subscriber communication session...the teaching sought to be attributed to Valentine are simply not taught in the document...one of ordinary skill in the art

would have seen no need to consider combining the teaching of Seazholtz into Valentine..." in pages 6-10.

In response to applicant's argument, the examiner respectfully disagrees with the argument above, and the combined system of Valentine and Seazholtz discloses the claimed invention as set forth in above in rejection.

Valentine discloses a multiple mode circuit (see FIG. 3, a line circuit 100 or FIG. 2, a line circuit 75) adapted for installation in equipment (see FIG. 1-2, a line circuit 100 installs inside DLC 42; see col. 4, line 16-46) that provides at least one of POTS service (see FIG. 3, POTS) and ISDN service (see FIG. 3, ISDN; see col. 7, lines 8-21, see col. 5, lines 60-67) on a single subscriber line while concurrently providing one of a plurality of types of xDSL telecommunication service (see FIG. 3, one type of XDSL) on said single subscriber line on said single subscriber line supplied to a subscriber' residence as a single pair of wires (see FIG. 1, see col. 4, lines 14-60; see col. 7, lines 8-21; a single interface provides POTS/ISDN and xDSL services concurrently/parallel over a single subscriber loop/trunk 29/41 to a subscriber 15 location/residence as single line circuit of pair of wires; note that a single line circuit in the Digital Loop Carriers (DLC) is a wire pair/loop).

In view of the above rejection, it is clear that Valentine discloses supplying ISDN or POTS concurrently with a type of xDSL communication service on a single subscriber line.

In response to applicant's argument that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., **a given time, or a time**) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van*

Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Moreover, nowhere in the applicant specification discloses transmission POTS/ISDN service and xDSL services with a respect to a given time or with related to timing. Thus, adding such new limitation in the application would be a new matter. It is clear that the applicant is arguing the limitation that does not even disclosed in the claim or specification, and thus the argument is irrelevant.

In response to argument on element 29 with respect to element 102, it is clear in view of FIG. 1 and 3 that there is a single pair of subscriber wires 29 (shown in FIG. 1) carrying concurrently transmitted multiplexed services such as POTS/ISDN and xDSL (shown in FIG. 3 as element 102). As one skilled in the ordinary can see in view of these figures and their corresponding disclosures that Valentine consistently and clearly disclose the elements 29 with respect to element 102.

Valentine discloses the controller (see FIG. 7, Micoroprocessor/controller of the central office) changing in response to a command received from a subscriber (see FIG. 7; see col. 14, line 430,43-50; changing mode according to a selection request/command from a subscriber) from a first type of xDSL telecommunication service (see col. 12, line 1-16; see col. 13, line 51-65; col. 14, line 1-17; a changing first conventional ADSL type/mode) to a second type of xDSL telecommunication service (see col. 12, line 17-36; see col. 13, line 51-65; col. 14, line 13-45; to a second bidirectional improved type/mode of DSL (e.g. directional HDSL, see col. 2, line 1-7,25-37; see col. 6, line 46-55) for real time application) during an ongoing subscriber communications session (see col. 12, line 1-5; during a communication section) of a subscriber (see FIG. 7, Subscriber on subscriber premises (e.g. caller)) on the signal subscriber line (see

FIG. 7, on the DSL line) with another party (see FIG. 7, another Subscriber on the opposite end (e.g. callee)); see col. 11, line 1-20; see col. 12, line 1-16).

Thus, it is clear that Valentine clearly discloses the claimed invention. Although it is not required, Seazholtz also discloses the claimed invention as set forth below.

Seazholtz also discloses the controller (see FIG. 7, Micoroprocessor/controller of the central office) changing in response to a command received from a subscriber (see FIG. 7; see col. 14, line 430,43-50; changing mode according to a selection request/command from a subscriber) from a first type of xDSL telecommunication service (see col. 12, line 1-16; see col. 13, line 51-65; col. 14, line 1-17; a changing first conventional ADSL type/mode) to a second type of xDSL telecommunication service (see col. 12, line 17-36; see col. 13, line 51-65; col. 14, line 13-45; to a second bidirectional improved type/mode of DSL (e.g. directional HDSL, see col. 2, line 1-7,25-37; see col. 6, line 46-55) for real time application) during an ongoing subscriber communications session (see col. 12, line 1-5; during a communication section) of a subscriber (see FIG. 7, Subscriber on subscriber premises (e.g. caller)) on the signal subscriber line (see FIG. 7, on the DSL line) with another party (see FIG. 7, another Subscriber on the opposite end (e.g. callee)); see col. 11, line 1-20; see col. 12, line 1-16).

Thus, the combined system of Valentine and Seazholtz discloses the claimed invention.

In response to argument that states that no need to consider combining the teaching of Seazholtz into Valentine, the rejection is based on the combined system of Valentine and Seazholtz, and thus the combined system of Valentine and Seazholtz anticipates the applicant invention. In response to applicant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on

combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

Conclusion

10. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ian N. Moore whose telephone number is 571-272-3085. The examiner can normally be reached on 9:00 AM- 6:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Doris To can be reached on 571-272-7629. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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Examiner
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8-13-07

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